

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-074931

(43)Date of publication of application : 16.03.1999

(51)Int.Cl.

H04L 12/54
H04L 12/58
G06F 13/00
G06F 17/30

(21)Application number : 09-236005

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(22)Date of filing : 01.09.1997

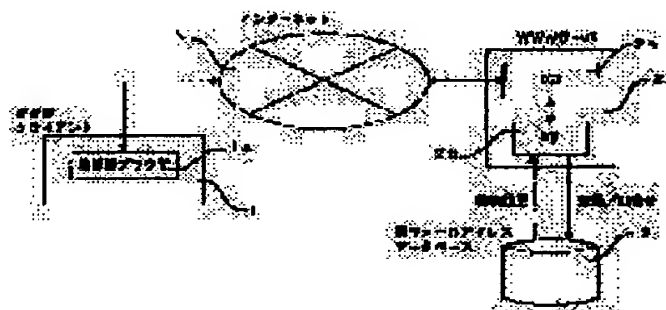
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(54) CHANGE/REGISTRATION/NOTIFICATION SYSTEM FOR ELECTRONIC MAIL ADDRESS

(57)Abstract

PROBLEM TO BE SOLVED: To retrieve a changed electronic mail address from an electronic mail address before a change by registering the change of the electronic mail address.

SOLUTION: A registration user accesses to a WWW server 2 by using a WWW browser 1a installed in a WWW client 1 and inputs the electronic mail addresses before and after the change. An address retrieval program software 2a associates the addresses before/after the change and stores them in a data base 3 through an SQL server 2b. The retrieval user accesses to the WWW server 2 by using the WWW browser 1a and inputs the electronic mail address whose change is to be learnt. The address retrieval program software 2a of the WWW server 2 retrieves the data base 3 through the SQL server 2b based on the inputted address, extracts the pertinent changed electronic mail address and returns a result to the WWW browser 1a.



LEGAL STATUS

[Date of request for examination] 20.12.1999

[Date of sending the examiner's decision of rejection] 05.02.2002

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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CLAIMS

[Claim(s)]

[Claim 1] The modification registration notice system of the e-mail address which comes to have the requirements for following (1) - (5).

- (1) Answer a demand of the registered user who is going to register modification of a self e-mail address, and transmit registration form.
- (2) Receive said registration form in which the e-mail address before modification and after modification was entered by said registered user, respectively, before said modification and after modification, associate each e-mail address mutually and store it in a database.
- (3) Answer a demand of the retrieval user who is going to search the e-mail address after modification of said registered user, and transmit a retrieval condition entry form.
- (4) Receive said retrieval condition entry form in which the e-mail address which serves as a candidate for retrieval by said retrieval user was entered, acquire the e-mail address used as the candidate for retrieval, ask said database and acquire the e-mail address after modification corresponding to the e-mail address used as the candidate for retrieval.
- (5) Transmit the retrieval result output form containing the e-mail address after modification acquired from said database to said retrieval user.

[Claim 2] The modification registration notice system of the e-mail address according to claim 1 characterized by requiring authentication about said registered user at the time of register operation.

[Claim 3] The modification registration notice system of the e-mail address according to claim 2 characterized by requiring authentication about said retrieval user at the time of retrieval actuation.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] Especially this invention relates to the modification registration notice system of a suitable e-mail address to get to know the e-mail address after modification with respect to the modification registration notice system of an e-mail address based on the e-mail address which was changed and became an invalid.

[0002]

[Description of the Prior Art] The Internet which is the computer network of a whole-world scale constitutes the data transmission path between the computer networks in a remote place, and is widely used increasingly also with a domestic personal computer by the end of today including a public institution and a company. And it is possible by using an electronic mail on the Internet to aim at quick communication which transcended a physical distance so to speak in individual human being etc. between companies.

[0003] Generally the e-mail address which can also be said to be the address on the Internet is expressed in the combination of the name of a mail server, and ID to the mail server. For example, the e-mail address of the user who owns ID called abc which is on a server called xyz.co.jp is expressed as abc@xyz.co.jp on the Internet. If it connects and shifts to the Internet and e-mail is transmitted to said address which becomes abc@xyz.co.jp from that computer, the mail will be distributed to said user and the computer which the user is using for connection with the Internet correctly through one on the Internet of paths.

[0004] However, once said user's e-mail address will be changed, the e-mail address currently used before modification will become already invalid, and all mails sent to the addressing to the address will be returned as a thing which cannot be sent. In this case, unless the user who changed the e-mail address addresses to the persons concerned and notifies the address after modification spontaneously, other users cannot know that the e-mail address was changed.

[0005] If mail stops arriving when its address is changed, such un-arranging is the same as that of the telephone number changing and a telephone stopping leading and the service with which fixed period mail is transmitted to a new address such by [in the real world] receiving inconvenient and sending the address of a new address to the post office, or the old telephone number is dialed, it is covered by the system to which it shows automatically the telephone number of a new address. However, such backup cannot be expected when an e-mail address is changed on the Internet. Therefore, it is very convenient if there is a system which can notify of modification of an e-mail address widely on the Internet.

[0006] From such a viewpoint, the service which can search the user's e-mail address is offered also on the Internet by inputting a user's name from a WWW site like the directory assistant (known as 104 service currently offered by Nippon Telegraph and Telephone Corporation (NTT).) in a telephone.

[0007]

[Problem(s) to be Solved by the Invention] However, there is the following trouble in such an existing e-mail address search service. If it does not know the name of the user who is going to get to know an e-mail address, it is that there will be no key for retrieval and the retrieval itself is impossible.

[0008] Although this is sensed like a strange thing in the actual world, it is not new on the so-called network. That is, it is because individual anonymity is widely accepted on the network unlike the real world (on halfway tacit target). When e-mail is especially used in the range of a hobby, calling each other mutually by a kind of nickname called the handle instead of an actual name etc. is performed widely. In such a case, although a partner's e-mail address and handle are known, it may happen that a name is not known.

[0009] Moreover, if the electronic mail is used using various kinds of e-mail software wear, since it will be considered [many] with it being overwhelming to use the reply purport-of-a-letter creation function which the e-mail software wear has for the reply to the received mail and the e-mail address of a reply place will be then given automatically, there is also an inclination that marked attention will not be paid to a partner's identifier.

[0010] If this invention is made in order to cancel the above trouble, and the purpose has modification in the e-mail address by inputting only the e-mail address of the receiver's address, it will be offering the modification registration notice system of the e-mail address which can search and output the e-mail address after modification.

[0011]

[Means for Solving the Problem] In order to attain said purpose, the modification registration notice system of the e-mail address concerning this invention comes to have the requirements for following (1) - (5).

[0012] (1) Answer a demand of the registered user who is going to register modification of a self e-mail address, and

transmit registration form.

[0013] (2) Receive said registration form in which the e-mail address before modification and after modification was entered by said registered user, respectively, before said modification and after modification, associate each e-mail address mutually and store it in a database.

[0014] (3) Answer a demand of the retrieval user who is going to search the e-mail address after modification of said registered user, and transmit a retrieval condition entry form.

[0015] (4) Receive said retrieval condition entry form in which the e-mail address which serves as a candidate for retrieval by said retrieval user was entered, acquire the e-mail address used as the candidate for retrieval, ask said database and acquire the e-mail address after modification corresponding to the e-mail address used as the candidate for retrieval.

[0016] (5) Transmit the retrieval result output form containing the e-mail address after modification acquired from said database to said retrieval user.

[0017] In addition, it may be made to require authentication at the time of said registered user's register operation, and you may constitute so that authentication may be further required also at the time of retrieval actuation of said retrieval user.

[0018]

[Embodiment of the Invention] Hereafter, with reference to an accompanying drawing, it explains about 1 operation gestalt of the modification registration notice system of the e-mail address concerning this invention. Drawing 1 is the outline block diagram of the system concerning 1 operation gestalt of this invention built on the Internet. The WWW client 1 is a computer connectable with Internet N through communication adapters, such as a modem and a terminal adopter (TA). The operating system currently generally used, for example, MS-DOS, MS-Windows (Microsoft Corp.), MacOS (Apple Computer, Inc.), OS/2 (IBM), UNIX (AT & T Corp.), etc. are adopted as the WWW client 1. An HTML file is transmitted and received in this WWW client 1 among other computers through WWW, and WWW browser 1a which can display it is installed in it. Generally it is called WWW perusal software and WWW browser 1a is NetScape. Navigator (Netscape Communications), Internet Explorer (Microsoft Corp.) etc. is used.

[0019] The WWW server 2 is the computer which has the server ability constituted possible [connection with WWW of Internet N], and that of the fundamental configuration as a computer is the same as that of said WWW client 1. Address retrieval program software 2a is included in the WWW server 2, and this program software functions on it as a center of the system concerning this operation gestalt. Address retrieval program software 2a is program software which is called a common gateway interface (it outlines Following CGI) and which is performed on a remote server. Although this program can be created in various language, the programming language called perl, for example can apply suitably.

[0020] SQL Server 2b is given to a database 3 by setting the instruction of address retrieval program software 2a to SQL (Structured Query Language (structured query language)), in order that address retrieval program software 2a may write the data acquired from the WWW client 1 in the later database 3 or may search the record stored in the database 3.

[0021] A database 3 is a relational database which connects the e-mail address before registered modification, and the e-mail address after modification, and is stored as one record. In addition, when attesting a user on the occasion of registration and retrieval of an e-mail address, the password used for authentication is also related with the e-mail address before and behind registered modification, and is stored as one record. In addition, although it is illustrating as the database 3 is formed in the exterior of the WWW server 2 if it is in the operation gestalt of drawing 1, where a database 3 is arranged physically can choose suitably, and, of course, it may also incorporate in the WWW server 2.

[0022] Next, the function of the modification registration notice system of the e-mail address concerning this operation gestalt is explained with reference to drawing 2 - drawing 9. These drawings show the screen when displaying the HTML file (it being hereafter called a "page".) generated by address retrieval program software 2a by WWW browser 1a of the WWW client 1. However, it does not pass over the design of the text contained in those pages, a carbon button, input fields and those arrangement, or a screen etc. to instantiation to the last, but, of course, other configurations can be adopted.

[0023] Drawing 2 is the so-called homepage first displayed on WWW browser 1a, when a user accesses the system of this operation gestalt. When a user inputs URL of this page into WWW browser 1a currently used, a homepage downloads from the WWW server 2. In order to make said URL well-known to a user, it is good to register information into various kinds of WWW search engines, for example, Yahoo!JAPAN, NTTDirectory, etc.

[0024] The carbon button for registration and the carbon button for retrieval are prepared in the homepage. If the carbon button for registration is clicked, address retrieval program software 2a of the WWW server 2 will transmit the input page for registration to WWW browser 1a.

[0025] Drawing 3 shows an example of said input page for registration. The two text input fields where the name "the e-mail address before modification" and "the e-mail address after modification" was attached are established in the input page for registration so that the registered user who is going to register modification of an e-mail address can input the contents of modification. A registered user writes the e-mail address which was being used before he changing, and the e-mail address after modification in each field. If it checks that there is no error in the contents of entry, the input page for registration as which the e-mail address before and behind modification was filled in will be returned to address retrieval program software 2a of the WWW server 2 by clicking a registration carbon button. If an error is in the filled-in e-mail address, when a registered user clicks a clear carbon button, the

contents written down in said text input field will be deleted.

[0026] If address retrieval program software 2a receives the input page [finishing / said entry] for registration, address retrieval program software 2a acquires each e-mail address before modification and after modification out of the page, and stores it in a database 3 through SQL Server 2b. In addition, although omitted in the system of this operation gestalt, when the contents of the acquired e-mail address are analyzed, it judges whether there is any entry error which breaks an SMTP protocol etc. and there is an error, the function to transmit the page which notifies that to WWW browser 1a may be prepared in address retrieval program software 2a. Or in order to put into practice registration prevention of the mistaken e-mail address more, it is good also as a configuration to which the page for a check which contained the e-mail address before and behind modification which said address retrieval program software 2a acquired as it was is generated, it transmits to WWW browser 1a, and a registration user validation is urged.

[0027] If the registration to a database 3 is completed, address retrieval program software 2a will transmit the check page (drawing 4) in which the e-mail address before registered modification and after modification (this example respectively abc@xyz.or.jp and efg@xyz.or.jp) was written to WWW browser 1a. If a registered user clicks a confirmation button, address retrieval program software 2a will transmit the homepage of drawing 2 to WWW browser 1a again, and will end registration processing. If the carbon button "returning" is clicked, the input page for registration of drawing 3 will be transmitted to WWW browser 1a, and it can be made to carry out re-register operation of the registered user.

[0028] Next, the case where the modification information on the e-mail address registered is retrieved is explained. If a retrieval carbon button is clicked by the homepage of said drawing 2, address retrieval program software 2a of the WWW server 2 will transmit the input page for retrieval of drawing 5 to WWW browser 1a. The retrieval user who is going to retrieve the modification information on an e-mail address to the input page for retrieval is an e-mail address for retrieval (address which serves as an invalid as the receiver's address of an electronic mail.). It is equivalent to the e-mail address before modification stated by the term of said registration processing. The text input field for inputting is prepared.

[0029] If a retrieval user inputs the e-mail address used as an invalid into said text input field and clicks an activation carbon button, the input page for retrieval containing the e-mail address used as the candidate for retrieval will be transmitted to the WWW server 2. Address retrieval program software 2a acquires the e-mail address which is contained in said text input field and which should be searched out of the page, and asks it to a database 3 through SQL Server 2b. If the e-mail address for [the] retrieval is registered into the database 3 as "an e-mail address before modification", a database 3 will return "the e-mail address after modification" corresponding to the address to address retrieval program software 2a through SQL Server 2b. Address retrieval program software 2a generates the retrieval result output page (drawing 6) containing "the e-mail address after modification" received from the database 3, and transmits it to WWW browser 1a. A retrieval user can know the effective e-mail address after modification by seeing this page based on the e-mail address used as an invalid.

[0030] When the e-mail address which the retrieval user inputted as a candidate for retrieval does not exist in a database 3, the page which notifies the retrieval impossible shown in drawing 7 is transmitted to a retrieval user's WWW browser 1a, and retrieval processing is finished.

[0031] Next, the case where authentication of system use of this operation gestalt is required of a registered user or a retrieval user is explained. Drawing 8 prepares the text input field for entering the password for authentication into the input page for registration of said drawing 3. When a registered user is going to perform modification registration, with the e-mail address before and behind modification, the password determined itself is entered into said field, a registration carbon button is clicked, and the page is transmitted to address retrieval program software 2a of the WWW server 2. Address retrieval program software 2a acquires the password corresponding to the e-mail address before modification and after modification, and it out of the received page, and stores it in a database 3 through SQL Server 2b. That is, the e-mail address before modification, the e-mail address after modification, and three data of a password will be stored in a database 3 as one record.

[0032] It becomes impossible thus, for any others other than a registered user to change registration data recklessly by including the password of a registered user proper in the record in addition to the e-mail address. For example, if the others do not know the password set up by said registered user even when it plans in order that the others may change a certain registered user's registered data, it can avoid accessing the applicable record on a database 3. Specifically in the corresponding field which is the input page for registration which said address retrieval program software 2a received It compares with the contents of the record in which the password which is not entered at all, and which is case [the password] and entered and the "e-mail address before modification" acquired corresponding to it are stored by the database 3. In spite of recording the corresponding "e-mail address before modification", when the passwords used as a group differ, it is possible to judge with unusual register operation and to stop registration processing. It is because it is thought that it is usually unnatural that the registration user of normal is going to change again the data already registered as "an e-mail address before modification."

[0033] Drawing 9 prepares the text input field for entering the password for authentication into the input page for retrieval of said drawing 5. The input page for retrieval as which the retrieval user entered the password is transmitted to address retrieval program software 2a of the WWW server 2. Address retrieval program software 2a acquires "the e-mail address for retrieval", and a password from the applicable field of the page. Subsequently, although address retrieval program software 2a performs an inquiry in a database 3 through SQL Server 2b like said

retrieval processing, when the password which corresponds to any record of a database 3 at this time does not exist, address retrieval program software 2a stops processing as an unusual retrieval demand. Thereby, those to whom the password is not taught from a registered user cannot search modification of the user's e-mail address. Although seemed to be also a configuration of increasing complicatedness when using the system of this invention, if the persons concerned are told about the once set-up password, since it comes to be able to perform retrieval of an e-mail address continuously after that using the same password, this is very effective when he will mean, if a registered user wants to tell only the man of a certain limited range about modification of an e-mail address.

[0034] In addition, the user authentication processing with such a password can be set up only about registration processing. Moreover, you may constitute so that it can choose whether a registered user sets up a password at the time of modification registration of an e-mail address, or it does not carry out. What is necessary is just to consider as the processing flow which skips the judgment of a retrieval user's contents of a password input in address retrieval program software 2a, when the record containing the e-mail address for [which the retrieval user inputted] retrieval is what does not contain a password, if it is in such a configuration.

[0035]

[Effect of the Invention] As mentioned above, according to the modification registration notice system of the e-mail address concerning this invention, the following effectiveness is done so as 1 operation gestalt of this invention explained to the detail.

[0036] (1) Only by inputting the address before a retrieval user changing by registering the e-mail address before a registered user changing, and the e-mail address after modification, since the e-mail address after modification of the registered user concerned can be known easily, it can notify of address modification, without creating the mail for notifying e-mail address modification one by one, and distributing it in large quantities. From a retrieval user's position, a means to investigate the modification existence of an e-mail address is acquired to e-mail having become delivery impossible suddenly conventionally, and there having been no how carrying out management, unless the owner of the address concerned to a notice can be found, and convenience increases.

[0037] (2) If a registered user's authentication is required in the case of register operation, it can prevent the others other than the registered user concerned rewriting the contents of registration freely. Moreover, if a retrieval user's authentication is required also in the case of retrieval actuation, the range of those who can perform a search of e-mail address modification using this system can be limited, and a registered user's protection of personal information can be planned.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the outline block diagram of the system concerning 1 operation gestalt of this invention built on the Internet.

[Drawing 2] It is drawing showing the homepage of the system concerning 1 operation gestalt of this invention.

[Drawing 3] It is drawing showing the input page for e-mail address modification registration of the system concerning 1 operation gestalt of this invention.

[Drawing 4] It is drawing showing the page which displays the contents of e-mail address modification registration of the system concerning 1 operation gestalt of this invention.

[Drawing 5] It is drawing showing the e-mail address modification retrieval condition input page of the system concerning 1 operation gestalt of this invention.

[Drawing 6] It is 1 of **** which shows the page which displays the e-mail address modification retrieval result of the system concerning 1 operation gestalt of this invention.

[Drawing 7] It is 2 of **** which shows the page which displays the e-mail address modification retrieval result of the system concerning 1 operation gestalt of this invention.

[Drawing 8] It is drawing showing the input page for e-mail address modification registration which prepared the authentication function.

[Drawing 9] It is drawing showing the e-mail address modification retrieval condition input page which prepared the authentication function.

[Description of Notations]

1 WWW Client

1a WWW browser

2 WWW Server

2a Address retrieval program software

2b SQL Server

3 Database

N Internet

[Translation done.]

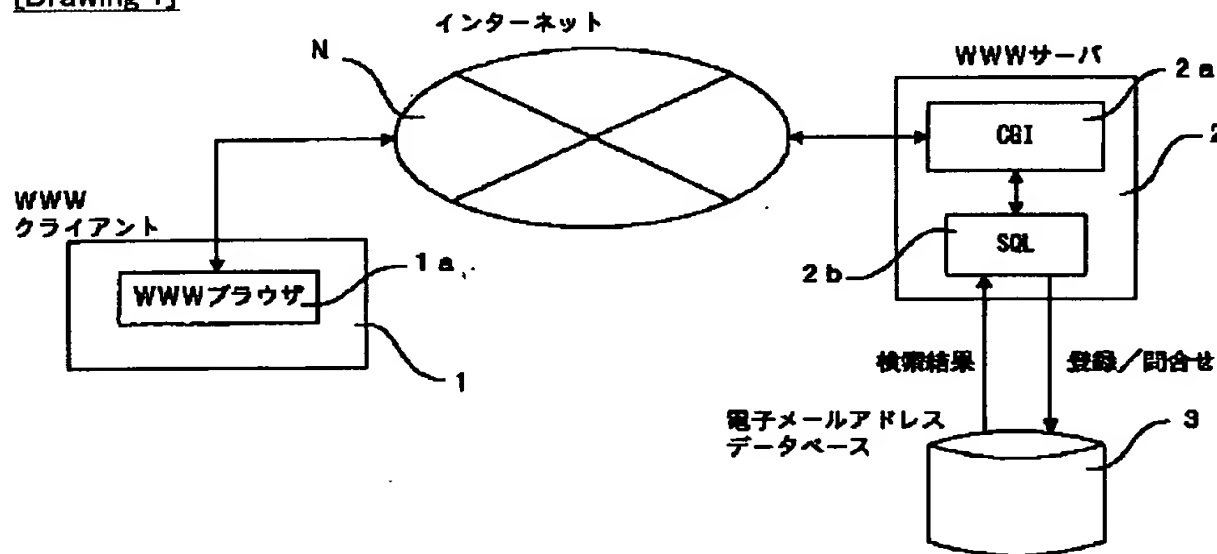
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DRAWINGS

[Drawing 1]



[Drawing 2]

電子メールアドレス検索ページへようこそ！

電子メールアドレスが変わったことを、WWWを通じて知らせるためのページです。

電子メールアドレスの持ち主が変更を登録していれば、変更前の電子メールアドレスから変更後の電子メールアドレスを探すことができます。

電子メールアドレスの変更を登録したい人は下の登録ボタンを、電子メールアドレスの検索をしたい人は、下の検索ボタンをクリックしてください。

[Drawing 3]

電子メールアドレスの変更を登録します

下の入力フィールドに、あなたの変更前の電子メールアドレスと変更後の電子メールアドレスを、それぞれ入力してください。

変更前の電子メールアドレス:

変更後の電子メールアドレス:

よろしければ、下の登録ボタンをクリックして登録してください。入力内容を訂正する場合は、クリアボタンをクリックして入力し直してください。

[Drawing 4]

登録内容

あなたの電子メールアドレスは、以下のように登録されました。内容が正しければ確認ボタンを、登録をやり直す場合には、戻るボタンをクリックして電子メールアドレスを入力し直してください。

変更前の電子メールアドレス : abc@xyz.or.jp

変更後の電子メールアドレス : efg@xyz.or.jp

確認 **戻る**

[Drawing 5]

変更された電子メールアドレスを検索します

下の入力フィールドに、検索したい電子メールアドレスを入力してください。

検索対象の電子メールアドレス :

よろしければ、下の実行ボタンをクリックして検索を実行してください。

入力内容を訂正する場合は、クリアボタンをクリックして入力し直してください。

実行 **クリア**

[Drawing 6]

検索結果

あなたがお探しの電子メールアドレス

abc@xyz.or.jp

は、以下のように変更されています。

変更後の電子メールアドレス :
efg@xyz.or.jp

ご利用ありがとうございました。

[Drawing 7]

検索結果

あなたがお探しの電子メールアドレス

abc@xyz.or.jp

は、登録されていませんでした。

ご利用ありがとうございました。

[Drawing 8]

電子メールアドレスの変更を登録します

下の入力フィールドに、あなたの変更前の電子メールアドレス、変更後の電子メールアドレス、パスワードを、それぞれ入力してください。

変更前の電子メールアドレス:
変更後の電子メールアドレス:

パスワード:

よろしければ、下の登録ボタンをクリックして登録してください。
入力内容を訂正する場合は、クリアボタンをクリックして入力し直してください。

[Drawing 9]**変更された電子メールアドレスを検索します**

下の入力フィールドに、検索したい電子メールアドレスとパスワードを入力してください。

検索対象の電子メールアドレス:

パスワード:

よろしければ、下の実行ボタンをクリックして検索を実行してください。

入力内容を訂正する場合は、クリアボタンをクリックして入力し直してください。

[Translation done.]